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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/514,577	02/28/2000	Fang Wu	3871	9020

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EXAMINER

JONES, PRENELL P

ART UNIT	PAPER NUMBER
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2664

DATE MAILED: 05/01/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
09/514,577

Applicant(s)
Wu et al.

Examiner
Prenell Jones

Art Unit
2664

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Feb 28, 2000.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-15 is/are allowed.
- 6) ☒ Claim(s) 16 is/are rejected.
- 7) ☒ Claim(s) 17-25 is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 8 6) ☐ Other:

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Specification

1. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Claim Rejections - 35 U.S.C. § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103© and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kidder in view of Kaye et al and Quay et al.

Regarding claim 16, Kidder discloses processing video/audio data and channels, (col. 5, line 25 thru col. 6, line 47, col. 7, line 5-59) sum of the bit-rates equal the maximum effective transmission bandwidth (channel capacity) and multiple audio/visual channels and associated bit streams. Kidder is silent on scheduling data for multiple channels for transmission. In analogous art, Kaye discloses (Abstract, col. 8, line 29 thru col. 9, line 67, col. 10, line 7-49) bit rate allocation in a multi-channel video system that includes determining the bit rate of each channel and sum of bit rate is the amount of the channel bandwidth and Quay discloses (Abstract, col. 3, line 18 thru col. 4, line 67) scheduling and processing data associated with an ATM system regardless of data type (i.e., voice, data or video), (col. 10, line 13-67) sum of bit rate of the total

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bandwidth (channel capacity), scheduling of bandwidth/channels, and (col. 12, line 28-67) channels scheduled according to time-stamps for ATM transmission. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have been motivated to implement scheduling video data for transmission as taught by Quay with the combined teachings of Kidder and Kaye for the purpose of managing the transmission/processing of data as to minimize contention with the assistance of scheduling and its association with time-stamps in a system that communicates video data.

Allowable Subject Matter

4. Claims 1-15 are allowed over prior art.

Regarding claim 1, the limitation, “a device performing statistical re-multiplexing of digital video signals wherein a second de-multiplexer re-coding an input signal in response to a second control signal received at the control port, the data input of the second de-multiplexer coupled to receive a second channel of data, the control port of the second de-multiplexer coupled to the second control port of the scheduler” is absent from the art. Claims 2-15 depend on claim 1, therefor, claims 2-15 are allowed for the same reason that claim 1 is allowed.

5. Claims 17-23 & 25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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Regarding claims 17 and 18, the limitation “determining whether the sum of the bit rates for multiple channels is greater than the channel capacity (bandwidth), if the sum of bit rates is greater than channel capacity then selecting a channel, determining whether the selected channel has a bit rate greater than the minimum bit rate for the channel and reducing the bit rate for the channel if it is determined that the selected channel is greater than the minimum bit rate for the channel” is absent from the art.

Regarding claim 19, the limitation “determining whether the selected channel has a bit rate close to the minimum bit rate for the channel and increasing the bit rate for the channel if it is determined that the selected channel has a bit rate close to the minimum bit rate for the channel” is absent from the art. Claims 20 and 21 depend on claim 19, therefore, claims 20 and 21 are objected to as well.

Regarding claim 22, the limitation “at least one of the plurality of channels of bit streams is a data stream that is buffered and not recorded” is absent from the art.

Regarding claim 23, the limitation “the step of reducing the bit rate for the channel includes the steps of dropping a B-frame and replacing it with a new B-frame which only repeats the previous frame” is absent from the art.

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Regarding claim 25, the limitation "step of selecting packets for transmission is performed by selecting a number of packets from each channel according to the equation:

Packet per Table (I) = (Schedule Table size * Rate(I)) / (Total Bandwidth)." is absent from the art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Prenell Jones whose telephone number is (703) 305-0630. The examiner can normally be reached on Monday thru Friday from 8:00 to 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wellington Chin, can be reached on (703) 305-4366. The fax phone number for the organization where this application or proceeding is assigned is (703) 873-9314

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Prenell Jones

April 29, 2003

A handwritten signature in black ink, appearing to read "Prenell Jones", written over the typed name and date.